
ABSTRACT

A multiple stage pump having valves upstream from each respective pump in a same line thereof. The respective lines then merge into a common line. The multiple stage pump prevents pressure variations. The multiple stage pump includes a first pump in a first stage and a second pump in a second stage. At least one valve is upstream from one of the first pump and the second pump in at least one of the first stage and the second stage. A common branch line connects the first stage and the second stage to a common hydraulic system.
